REMARKS

Claims 1-40 were pending in the application. Claims 1, 17, 24, 28, 29, 32 and 33 have been amended. Claims 38-40 have been cancelled. Claims 41-43 have been added. Claims 1, 17, 24, 29, 32 and 33 are independent claims. No new matter has been added by this amendment.

Applicants respectfully submit that the present application is now in condition for allowance. Accordingly, reconsideration and allowance of the present application are respectfully requested.

Claim Amendments

Claims 1, 17, 24, 29, 32 and 33 have been amended. Support for the amendments is found, for example, at one or more portions of page 10, line 19-page 11, line 2; page 12, line 1-19 and page 13, lines 6-17, one or more portions of FIG. 2, and one or more portions of original claim 17, line 1 and original claim 24, line 2.

Claims 41-43 have been added. Support for added claim 41 is found, for example, at one or more portions of page 10, line 6-page 11, line 2 and page 14, lines 17-28. Support added claim 42 is found, for example, at one or more portions of page 3, line 21-page 4, line 6; page 5, line 26-page 6, line 6 and page 12, line 1-page 13, line 17. Support for added claim 43 is found for example at one or more portions of claim 14 and at one or more portions of page 3, line 21-page 4, line 6; page 5, line 26-page 6, line 6 and page 12, line 1-page 13, line 17.

Claim Rejections – 35 USC § 103

Claims 1-33, 36, 37, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,860,064 (Henton) in view of US Patent 6,810,379 (Kochanski et al).

Reconsideration and withdrawal of the rejections is respectfully requested.

Claim 1

Independent claim 1 has been amended.

Independent claim 1 now recites a method, comprising: identifying text to convert to speech; selecting a speech style sheet from a set of available speech style sheets, said speech style sheet defining desired speech characteristics for a first voice style associated with a first voice-type,-said speech style sheet further defining speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with a second voice-type, and speech characteristics for the second voice style associated with the second voice-type; marking said text to associate said text with said selected speech style sheet; and converting said text to speech having said desired speech characteristics by applying a low level markup generated by said speech style sheet.

Neither Henton nor Kochanski et al. nor any combination thereof proposed in the Office Action teach or suggest the method of claim 1.

Henton discloses a method and apparatus for automatic generation of vocal emotion in a synthetic text-to-speech system (title). FIG. 5 is a flowchart of the graphical user interface editor to vocal emotion text-to-speech modification communication and translation (col. 5, lines 11-14). After a portion of text has been selected 501, and a particular vocal emotion has been chosen 503, the appropriate speech synthesizer values are obtained via look-up table 505, and thereby applied 507 by embedding the appropriate speech synthesizer commands in the selected text (col. 9, lines 49-54).

However, even if choosing a vocal emotion constitutes selecting a speech style sheet from a set of available speech style sheets, as is asserted in the Office Action, Henton does not teach or suggest that the asserted speech style sheet defines desired speech characteristics for a first voice style associated with a first voice-type, speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with a second voice-type, and speech characteristics for the second voice style associated with the second voice-type.

For at least the reason above, Henton does not teach or suggest a method that includes selecting a speech style sheet from a set of available speech style sheets, said speech style sheet defining desired speech characteristics for a first voice style associated with a first voice-type,-said speech style sheet further defining speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with a second voice-type, and speech characteristics for the second voice style associated with the second voice-type, as recited in claim 1.

Kochanski et al. disclose a method and apparatus for controlling a speech synthesis system to provide multiple styles of speech (title).

However, as with Henton, Kochanski et al. do not teach or suggest a method that includes selecting a speech style sheet from a set of available speech style sheets, said speech style sheet defining desired speech characteristics for a first voice style associated with a first voice-type,-said speech style sheet further defining speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with a second voice-type, and speech characteristics for the second voice style associated with the second voice-type, as recited in claim 1.

Nor does any combination proposed in the Office Action teach or suggest a method that includes selecting a speech style sheet from a set of available speech style sheets, said speech style sheet defining desired speech characteristics for a first voice style associated with a first voice-type,-said speech style sheet further defining speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with a second voice-type, and speech characteristics for the second voice style associated with the second voice-type, as recited in claim 1.

Moreover, since neither Henton, no Kochanski et al. nor any combination proposed in the Office Action teaches or suggests the recited speech style sheet, neither Henton, nor Kochanski et al. nor any combination proposed in the Office Action can possibly teach or suggest marking text to associate said text with said selected speech style sheet.

Nor can Henton, or Kochanski et al. or any combination proposed in the Office Action teach or suggest converting said text to speech having said desired speech characteristics by applying a low level markup generated by said speech style sheet.

For at least the reasons above, neither Henton nor Kochanski et al. nor any combination thereof proposed in the Office Action teach or suggest a method, comprising: identifying text to convert to speech; selecting a speech style sheet from a set of available speech style sheets, said speech style sheet defining desired speech characteristics for a first voice style associated with a first voice-type,-said speech style sheet further defining speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with a second voice-type, and speech characteristics for the second voice style associated with the second voice-type; marking said text to associate said text with said selected speech style sheet; and converting said text to speech having said desired speech characteristics by applying a low level markup generated by said speech style sheet, as recited in claim 1.

Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

Claim 17

Independent claim 17 has been amended.

Independent claim 17 now recites a speech style sheet, comprising: speech characteristics for at least one voice style associated with at least one voice-type, said at least one voice style relating a high level markup of said voice-type to a low level markup of said voice-type, said speech characteristics for at least one voice style associated with said at least one voice-type including: speech characteristics for a first voice style associated with a first voice-type, speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with the second voice-type, and speech characteristics for the second voice style associated with the second voice-type.

Neither Henton nor Kochanski et al. nor any combination thereof proposed in the Office Action teach or suggest the speech style sheet of claim 17.

Henton discloses a method and apparatus for automatic generation of vocal emotion in a synthetic text-to-speech system (title).

However, even if Henton discloses a type of speech style sheet, Henton does not teach or suggest that the asserted speech style sheet includes speech characteristics for at least one voice style associated with said at least one voice-type including: speech characteristics for a first voice style associated with a first voice-type, speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with the second voice-type, and speech characteristics for the second voice style associated with the second voice-type.

For at least the reason above, Henton does not teach or suggest a speech style sheet that includes speech characteristics for at least one voice style associated with said at least one voice-type including: speech characteristics for a first voice style associated with a first voice-type, speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with the second voice-type, and speech characteristics for the second voice style associated with the second voice-type, as recited in claim 17.

Kochanski et al. disclose a method and apparatus for controlling a speech synthesis system to provide multiple styles of speech (title).

However, even if Kochanski et al. disclose a type of speech style sheet, Kochanski et al. do not teach or suggest that the asserted speech style sheet includes speech characteristics for at least one voice style associated with said at least one voice-type including: speech characteristics for a first voice style associated with a first voice-type, speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with the second voice-type, and speech characteristics for the second voice style associated with the second voice-type, as recited in claim 17.

Nor does any combination proposed in the Office Action teach or suggest a speech style sheet that includes speech characteristics for at least one voice style associated with said at least one voice-type including: speech characteristics for a first voice style associated with a first voice-type, speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with the second voice-type, and speech characteristics for the second voice style associated with the second voice-type, as recited in claim 17.

For at least the reasons above, neither Henton nor Kochanski et al. nor any combination thereof proposed in the Office Action teach or suggest a speech style sheet, comprising: speech characteristics for at least one voice style associated with at least one voice-type, said at least one voice style relating a high level markup of said voice-type to a low level markup of said voice-type, said speech characteristics for at least one voice style associated with said at least one voice-type including: speech characteristics for a first voice style associated with a first voice-type, speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with the second voice-type, and speech characteristics for the second voice style associated with the second voice-type, as recited in claim 17.

Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

Claim 24

Independent claim 24 has been amended.

Independent claim 24 now recites an apparatus, comprising: a processor having access to at least one speech style sheet, said at least one speech style sheet containing a definition of a first voice style associated with a first voice-type, and said definition relating a high level markup of said first voice-type to a low level markup of said first voice-type, wherein said processor is operative to convert said high level markup to said low level markup, the at least one speech style sheet further containing a definition of a second voice style associated with the first voice-type, a definition of the first voice style

associated with the second voice-type, and a definition of the second voice style associated with the second voice-type; a user interface device for applying said at least one voice style to text associated with said voice-type, said user interface being in communication with said processor; and an output device connected to said processor for converting said text with said low level markup to speech.

Neither Henton nor Kochanski et al. nor any combination thereof proposed in the Office Action teach or suggest the apparatus of claim 24.

Henton discloses a method and apparatus for automatic generation of vocal emotion in a synthetic text-to-speech system (title).

However, even if Henton discloses at least one speech style sheet, Henton does not teach or suggest that the asserted at least one speech style sheet contains a definition of a first voice style associated with a first voice-type, a definition of a second voice style associated with the first voice-type, a definition of the first voice style associated with the second voice-type, and a definition of the second voice style associated with the second voice-type.

Kochanski et al. disclose a method and apparatus for controlling a speech synthesis system to provide multiple styles of speech (title).

However, as with Henton, Kochanski et al. do not teach or suggest at least one speech style sheet contains a definition of a first voice style associated with a first voice-type, a definition of a second voice style associated with the first voice-type, a definition of the first voice style associated with the second voice-type, and a definition of the second voice style associated with the second voice-type.

For at least the reasons above, neither Henton nor Kochanski et al. nor any combination thereof proposed in the Office Action teach or suggest an apparatus, comprising: a processor having access to at least one speech style sheet, said at least one speech style sheet containing a definition of a first voice style associated with a first voice-type, and said definition relating a high level markup of said first voice-type to a low level markup of said first voice-type, wherein said processor is operative to convert said high level markup to said low level markup, the at least one speech style sheet

further containing a definition of a second voice style associated with the first voice-type, a definition of the first voice style associated with the second voice-type, and a definition of the second voice style associated with the second voice-type; a user interface device for applying said at least one voice style to text associated with said voice-type, said user interface being in communication with said processor; and an output device connected to said processor for converting said text with said low level markup to speech, as recited in claim 24.

Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

Claim 29

Independent claim 29 has been amended.

Independent claim 29 now recites a system, comprising: a designer device for creating speech style sheets; a speech style sheet at least partially created by said designer device, said speech style sheet defining speech characteristics for a first voice style associated with a first voice-type, speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with the second voice-type, and speech characteristics for the second voice style associated with the second voice-type; a text-to-speech device for receiving text associated with the first voice-type, said text having a high level markup associated with said first voice style, said text-to-speech device having access to said speech style sheet and also having: a memory for storing computer executable code; and a processor for executing the program code stored in memory, wherein the program code includes; code to determine, by accessing said speech style sheet, a low level markup associated with said high level markup; and code to convert said high level markup of said text to said low level markup; and an output device for producing expressive speech using said text with said low level markup, said output device in communication with said text-to-speech device.

Neither Henton nor Kochanski et al. nor any combination thereof proposed in the Office Action teach or suggest the system of claim 29.

Henton discloses a method and apparatus for automatic generation of vocal emotion in a synthetic text-to-speech system (title).

However, even if Henton discloses a speech style sheet, Henton does not teach or suggest that the asserted speech style sheet defines speech characteristics for a first voice style associated with a first voice-type, speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with the second voice-type, and speech characteristics for the second voice style associated with the second voice-type.

Kochanski et al. disclose a method and apparatus for controlling a speech synthesis system to provide multiple styles of speech (title).

However, as with Henton, Kochanski et al. do not teach or suggest a speech style sheet that defines speech characteristics for a first voice style associated with a first voice-type, speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with the second voice-type, and speech characteristics for the second voice style associated with the second voice-type.

For at least the reasons above, neither Henton nor Kochanski et al. nor any combination thereof proposed in the Office Action teach or suggest a system, comprising: a designer device for creating speech style sheets; a speech style sheet at least partially created by said designer device, said speech style sheet defining speech characteristics for a first voice style associated with a first voice-type, speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with the second voice-type, and speech characteristics for the second voice style associated with the second voice-type; a text-to-speech device for receiving text associated with the first voice-type, said text having a high level markup associated with said first voice style, said text-to-speech device having access to said speech style sheet and also having: a memory for storing computer executable code; and a processor

for executing the program code stored in memory, wherein the program code includes; code to determine, by accessing said speech style sheet, a low level markup associated with said high level markup; and code to convert said high level markup of said text to said low level markup; and an output device for producing expressive speech using said text with said low level markup, said output device in communication with said text-to-speech device, as recited in claim 29.

Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

Claim 32

Independent claim 32 has been amended.

Independent claim 32 now recites an article of manufacture, comprising: a computer usable medium having computer readable program code means embodied therein for producing expressive text-to-speech, comprising: computer readable program code means for identifying text to convert to speech; computer readable program code means for selecting a speech style sheet from a set of available speech style sheets, said speech style sheet defining desired speech characteristics for a first voice style associated with a first voice-type, said speech style sheet further defining speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with a second voice-type, and speech characteristics for the second voice style associated with the second voice-type; computer readable program code means for marking said text to associate said text with said selected speech style sheet; and computer readable program code means for converting said text to speech having said desired speech characteristics by applying a low level markup associated with said speech style sheet.

Neither Henton nor Kochanski et al. nor any combination thereof proposed in the Office Action teach or suggest the article of manufacture of claim 32.

Henton discloses a method and apparatus for automatic generation of vocal emotion in a synthetic text-to-speech system (title).

However, even if choosing a vocal emotion constitutes selecting a speech style sheet from a set of available speech style sheets, as is asserted in the Office Action, Henton does not teach or suggest that the asserted speech style sheet defines desired speech characteristics for a first voice style associated with a first voice-type, and further defines speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with a second voice-type, and speech characteristics for the second voice style associated with the second voice-type.

For at least the reason above, Henton does not teach or suggest an article of manufacture, comprising: a computer usable medium having computer readable program code means embodied therein for producing expressive text-to-speech, comprising: computer readable program code means for selecting a speech style sheet from a set of available speech style sheets, said speech style sheet defining desired speech characteristics for a first voice style associated with a first voice-type, said speech style sheet further defining speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with a second voice-type, and speech characteristics for the second voice style associated with the second voice-type, as recited in claim 32.

Kochanski et al. disclose a method and apparatus for controlling a speech synthesis system to provide multiple styles of speech (title).

However, as with Henton, Kochanski et al. do not teach or suggest an article of manufacture, comprising: a computer usable medium having computer readable program code means embodied therein for producing expressive text-to-speech, comprising: computer readable program code means for selecting a speech style sheet from a set of available speech style sheets, said speech style sheet defining desired speech characteristics for a first voice style associated with a first voice-type, said speech style sheet further defining speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with a second voice-type, and speech characteristics for the second voice style associated with the second voice-type, as recited in claim 32.

Nor does any combination proposed in the Office Action teach or suggest an article of manufacture, comprising: a computer usable medium having computer readable program code means embodied therein for producing expressive text-to-speech, comprising: computer readable program code means for selecting a speech style sheet from a set of available speech style sheets, said speech style sheet defining desired speech characteristics for a first voice style associated with a first voice-type, said speech style sheet further defining speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with a second voice-type, and speech characteristics for the second voice style associated with the second voice-type, as recited in claim 32.

Moreover, since neither Henton, no Kochanski et al. nor any combination proposed in the Office Action teaches or suggests the recited speech style sheet, neither Henton, nor Kochanski et al. nor any combination proposed in the Office Action can possibly teach or suggest computer readable program code means for marking said text to associate said text with said selected speech style sheet.

Nor can Henton, or Kochanski et al. or any combination proposed in the Office Action teach or suggest computer readable program code means for converting said text to speech having said desired speech characteristics by applying a low level markup associated with said speech style sheet.

For at least the reasons above, neither Henton nor Kochanski et al. nor any combination thereof proposed in the Office Action teach or suggest an article of manufacture, comprising: a computer usable medium having computer readable program code means embodied therein for producing expressive text-to-speech, comprising: computer readable program code means for identifying text to convert to speech; computer readable program code means for selecting a speech style sheet from a set of available speech style sheets, said speech style sheet defining desired speech characteristics for a first voice style associated with a first voice-type, said speech style sheet further defining speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with a second voice-type, and speech characteristics for the second voice style associated with the

second voice-type; computer readable program code means for marking said text to associate said text with said selected speech style sheet; and computer readable program code means for converting said text to speech having said desired speech characteristics by applying a low level markup associated with said speech style sheet, as recited in claim 32.

Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

Claim 33

Independent claim 33 has been amended.

Independent claim 33 now recites a system for producing expressive text-to-speech, comprising: means for identifying text to convert to speech; means for selecting a speech style sheet from a set of available speech style sheets, said speech style sheet defining desired speech characteristics for a first voice style associated with a first voice-type, said speech style sheet further defining speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with a second voice-type, and speech characteristics for the second voice style associated with the second voice-type; means for marking said text to associate said text with said selected speech style sheet; and means for converting said text to speech having said desired speech characteristics by applying a low level markup associated with said speech style sheet.

Neither Henton nor Kochanski et al. nor any combination thereof proposed in the Office Action teach or suggest the article of manufacture of claim 33.

Henton discloses a method and apparatus for automatic generation of vocal emotion in a synthetic text-to-speech system (title).

However, even if choosing a vocal emotion constitutes selecting a speech style sheet from a set of available speech style sheets, as is asserted in the Office Action, Henton does not teach or suggest that the asserted speech style sheet defines desired

speech characteristics for a first voice style associated with a first voice-type, and further defines speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with a second voice-type, and speech characteristics for the second voice style associated with the second voice-type.

For at least the reason above, Henton does not teach or suggest a system for producing expressive text-to-speech, comprising: means for identifying text to convert to speech; means for selecting a speech style sheet from a set of available speech style sheets, said speech style sheet defining desired speech characteristics for a first voice style associated with a first voice-type, said speech style sheet further defining speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with a second voice-type, and speech characteristics for the second voice style associated with the second voice-type, as recited in claim 33.

Kochanski et al. disclose a method and apparatus for controlling a speech synthesis system to provide multiple styles of speech (title).

However, as with Henton, Kochanski et al. do not teach or suggest a system for producing expressive text-to-speech, comprising: means for identifying text to convert to speech; means for selecting a speech style sheet from a set of available speech style sheets, said speech style sheet defining desired speech characteristics for a first voice style associated with a first voice-type, said speech style sheet further defining speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with a second voice-type, and speech characteristics for the second voice style associated with the second voice-type, as recited in claim 33.

Nor does any combination proposed in the Office Action teach or suggest a system for producing expressive text-to-speech, comprising: means for identifying text to convert to speech; means for selecting a speech style sheet from a set of available speech style sheets, said speech style sheet defining desired speech characteristics for a first voice style associated with a first voice-type, said speech style sheet further defining speech characteristics for a second voice style associated with the first voice-type, speech

characteristics for the first voice style associated with a second voice-type, and speech characteristics for the second voice style associated with the second voice-type, as recited in claim 33.

Moreover, since neither Henton, no Kochanski et al. nor any combination proposed in the Office Action teaches or suggests the recited speech style sheet, neither Henton, nor Kochanski et al. nor any combination proposed in the Office Action can possibly teach or suggest means for marking said text to associate said text with said selected speech style sheet.

Nor can Henton, or Kochanski et al. or any combination proposed in the Office Action teach or suggest means for converting said text to speech having said desired speech characteristics by applying a low level markup associated with said speech style sheet.

For at least the reasons above, neither Henton nor Kochanski et al. nor any combination thereof proposed in the Office Action teach or suggest a system for producing expressive text-to-speech, comprising: means for identifying text to convert to speech; means for selecting a speech style sheet from a set of available speech style sheets, said speech style sheet defining desired speech characteristics for a first voice style associated with a first voice-type, said speech style sheet further defining speech characteristics for a second voice style associated with the first voice-type, speech characteristics for the first voice style associated with a second voice-type, and speech characteristics for the second voice style associated with the second voice-type; means for marking said text to associate said text with said selected speech style sheet; and means for converting said text to speech having said desired speech characteristics by applying a low level markup associated with said speech style sheet, as recited in claim 33.

Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

Dependent claims

Claims 2-16, 34-35, 41 and 43 depend from independent claim 1 and therefore should be allowed for at least the reasons set forth above with respect to independent claim 1.

Claims 18-23, 36-37 and 42 depend from independent claim 17 and therefore should be allowed for at least the reasons set forth above with respect to independent claim 17.

Claims 25-28, and 38-39 depend from independent claim 24 and therefore should be allowed for at least the reasons set forth above with respect to independent claim 24.

Claims 30-31 and 40 depend from independent claim 29 and therefore should be allowed for at least the reasons set forth above with respect to independent claim 29.

CONCLUSION

For at least the reasons set forth above, Applicants respectfully submit that the present application is in condition for allowance. Accordingly, reconsideration and allowance of the present application are respectfully requested.

Because the reasons set forth above are sufficient to overcome the rejections set forth in the outstanding Office Action, Applicants do not address some of the assertions set forth therein and/or other possible reasons for overcoming the rejections. Nonetheless, Applicants reserve the right to address such assertions and/or to present other possible reasons for overcoming the rejections in any future paper and/or proceeding.

If the Examiner believes that a telephone interview would expedite the prosecution of this application in any way, the Examiner is cordially requested to contact the undersigned via telephone at (203) 972-0006, ext. 1014.

Respectfully submitted,

December 19, 2007
Date

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